

REMARKS:

Applicants respectfully request the Examiner to reconsider and again examine the claims in view of the following remarks.

Claims 1-20 are pending in the application. Claims 2-4, 7-13, and 15-20 are objected to. Claims 1, 6, and 14 are rejected.

As an initial matter, Applicants cannot identify that certain signed and initialed information disclosure forms (PTO Form 1449) have been returned as identified below. Applicants respectfully request that the Examiner consider the art cited in the below-identified information disclosure statements (if not already done) and provide the signed and initialed information disclosure forms as indicated.

1. Submitted with certificate of mailing dated December 17, 2001;
2. Submitted with certificate of mailing dated March 11, 2002;
3. Submitted with certificate of mailing dated May 3, 2002;
4. Submitted with certificate of mailing dated May 10, 2002;
4. Submitted with certificate of mailing dated May 21, 2002;
6. Electronically submitted on September 13, 2002;
7. Electronically submitted on September 13, 2002 (second submission on that date);
8. Electronically submitted on September 13, 2002 (third submission on that date);
9. Electronically submitted on October 30, 2002.

Applicants also note that formal drawings earlier submitted on October 30, 2001 have not been indicated as being approved by the Examiner. Approval of the drawings is respectfully requested.

The Rejections under 35 U.S.C. §102(b)

The Examiner rejects Claims 1 and 5 under 35 U.S.C. §102(b) as being anticipated by Freedman (U.S. Patent number 2,939,918), McKinney (U.S. Patent number 3,701,154), or Teich (U.S. Patent number 3,875,399).

Applicants submit that Claim 1 is patentably distinct over Freedman, McKinney, and Teich, since none of these references describe or suggest a video amplifier comprising "...an attenuator having an input terminal coupled to the output terminal of said first filter stage and an output terminal, said attenuator comprising a temperature sensitive device..." as set forth in Claim 1. With this particular arrangement, as described in the specification at page 3, lines 10 and 11, the present invention provides "... a relatively simple and inexpensive way to compensate for temperature induced gain variations in an RF amplifier. This is because the temperature compensation is implemented in the low video frequency amplifier..."

In contrast, Freedman in FIG. 1 provides a mixer stage 32 between filters 28 and 42. The Examiner asserts that the tube 32 "...would offer some minimal amount of attenuation..." Freedman describes the mixer stage 32 at column 2, lines 29-30 as heterodyning the signals from the filter 28 and from local oscillator 34. Freedman does not describe or suggest that the mixer stage provides attenuation. Furthermore, the mixer stage 32 of Freedman does not comprise a temperature sensitive device, as does the attenuator of the present invention.

Furthermore, according to the Manual of Patent Examining Procedure (MPEP) §2112, the fact that a certain characteristic *may* be present in the prior art is not sufficient to establish the inherency of that characteristic. Thus, applicants respectfully submit that the mere fact that the Freeman tube 32 *could* provide attenuation is not sufficient. The Examiner has made similar assertions with regard to others of the cited references and Applicants submit that in each case inherency has not been established.

McKinney in FIG. 1 provides phase shifters 30, 32, 34 and limiters 40, 42, 44, any one of which the Examiner asserts "...could be an attenuating device..." McKinney at column 4, lines 1-5 describes "[t]he purpose of these phase shifters 30-32-34 is to provide the system designer with a means of phase coding to adjust the system performance..." Of the limiters 40-42-44, McKinney describes that "the performance of a comparator and an ideal hard limiter are identical." (column 4, lines 12-13) McKinney does not describe or suggest that either the phase shifters 30, 32, 34 or the limiters 40, 42, 44 provides attenuation. Furthermore, neither the phase shifters 30, 32, 34 nor the limiters 40, 42, 44 of McKinney comprise the claimed temperature sensitive device.

Teich in FIG. 1 describes a non-linear device 26 that the Examiner asserts "...would attenuate to some extent..." At column 4, line 66 to column 5, line 1, Teich describes, "[t]he non-linear device 26 is operable to produce a signal having a component at the difference frequency  $\Delta f$ . That is, the cross product of the input signals ( $f_3 - f_L$ ) and ( $f_4 - f_L$ ) will produce a signal at the output whose peak is centered at substantially the frequency  $\Delta f$ ." Teich does not describe or suggest that the non-linear device 26 provides attenuation. Furthermore, the non-linear device 26 of Teich does not comprise a temperature sensitive device, as does the claimed attenuator.

In view of the above, Applicants submit that Claim 1 is patentably distinct over Freedman, McKinney, and Teich.

Claim 5 depends from and thus includes the limitations of Claim 1. Thus, Applicants submit that Claim 5 is patentably distinct over the cited references, at least for the reasons discussed above in conjunction with Claim 1.

The Examiner also rejects Claim 1 under 35 U.S.C. §102(b) as being anticipated by Fishbein et al. (U.S. Patent number 3,465,336), Smith (U.S. Patent number 3,987,402), Smith (U.S. Patent number 4,067,013), or Denz (U.S. Patent number 2,830,257).

Applicants submit that Claim 1 is patentably distinct over Fishbein et al., Smith ('402) Smith ('013), and Denz since none of these references describe or suggest "a video amplifier comprising...an attenuator having an input terminal coupled to the output terminal of said first filter stage and an output terminal, said attenuator comprising a temperature sensitive device..." as set forth in Claim 1.

In contrast, Fishbein et al. in FIG. 1 provides a detector 11 between filters 9 and 13. Fishbein et al. describes that Doppler frequencies of interest are selected by filter 9 and rectified by detector 11. (column 3, lines 8-10) Fishbein et al. does not describe or suggest that the detector 11 provides attenuation. Furthermore, the detector 11 of Fishbein et al. does not comprise a temperature sensitive device, as does the claimed attenuator.

Smith ('402) in FIG. 1 provides transmission paths  $P_1$ ,  $P_2$ ,  $P_3$  between filters H.P.<sub>1</sub>, H.P.<sub>2</sub>, H.P.<sub>3</sub> and filters L.P.<sub>1</sub>, L.P.<sub>2</sub>, and L.P.<sub>3</sub>, respectively. Smith ('402) describes at column 3, lines 3-4 "...transmission paths  $P_i$  which vary in nature from a simple connecting lead to an electromagnetic or acoustic transmission medium." Smith ('402) does not describe or suggest that the transmission paths  $P_1$ ,  $P_2$ ,  $P_3$  generate a negative gain or provide attenuation. Furthermore, the transmission paths  $P_1$ ,  $P_2$ ,  $P_3$  of Smith ('402) do not comprise a temperature sensitive device, as does the claimed attenuator.

Smith ('013) in FIG. 1 provides fullwave detectors 22, 32 between filters 20, 30 and 24, 34 respectively. Smith ('013) does not describe or suggest that the detectors 22, 32 generate a negative gain or provide attenuation. Furthermore, the detectors 22, 32 of Smith ('013) do not comprise a temperature sensitive device, as does the claimed attenuator.

Denz in FIG. 3 provides in a direct-current amplifier (column 1, line 2). Therefore, Applicants submit that Denz does not describe or suggest the claimed video amplifier. The claimed video amplifier is adapted to operate at video frequencies, which are described at page 9,

line 5 to be "... between 1KHz to 40KHz." In contrast, the amplifier of Denz is a direct-current amplifier operating at near zero frequency.

Denz in FIG. 3, shows group receiving equipment 254. The Examiner directs applicant's attention to column 3, lines 10-14, where it is stated that "[s]ignals on line 253 from the group line filter pass through band-pass filters 310, regulator 314, and the group demodulating and amplifying equipment 316, and thence over line 246 to the receiving band-pass filters of the four channels in parallel." Denz does not describe or suggest that the demodulating and amplifying equipment 316 or the regulator 314 provides attenuation. Furthermore, neither the demodulating and amplifying equipment 316 nor the regulator 314 of Denz comprises a temperature sensitive device, as does the attenuator of the present invention.

In view of the above, Applicants submit that the rejection of Claims 1 and 5 under 35 U.S.C. §102(b) should be removed.

The Rejections under 35 U.S.C. §103(a)

The Examiner rejects Claims 6 and 14 under 35 U.S.C. §103(a) as being obvious over Berrod et al. (U.S. Patent number 3,942,181). The Examiner recognizes that Berrod et al. does not disclose a radar. The Examiner asserts that Berrod et al. teaches such use for the amplifier in the Brief Description of the Drawings, where a radar is suggested as an application for the amplifier of Figure 4.

Applicants submit that Claim 6 is patentably distinct over Berrod et al., since the cited reference neither describes nor suggests "... a video amplifier ...wherein said video amplifier comprises a temperature compensating attenuator," as recited in Claim 6.

The claimed video amplifier is adapted to operate at video frequencies, which are described at page 9, line 5 to be "... between 1KHz to 40KHz." By operating on down-converted radar signals rather than high frequency RF signals, the claimed video amplifier with its

temperature compensating attenuator has advantages over conventional techniques for compensating for temperature induced gains in the RF amplifier, which conventional techniques are described in the Background of the Invention section.

In contrast, Berrod et al. shows in FIG. 2 a variable-gain amplifier. In order to control gain of the amplifier, Berrod et al. uses a PIN diode, for example the PIN diode 9 of FIG. 3, operating at a sufficiently high frequency that it behaves as a variable resistor rather than a diode. As described by Berrod et al. at column 2, lines 62-64, "...there is a lower limit on the order of 1 megahertz for the frequency at which the diode [9] will operate as a variable resistor." Therefore, Applicants submit that the Berrod et al. amplifier is not a video amplifier as claimed. Applicants also submit that Berrod et al. does not describe or suggest that the pin diode 9 or the operational amplifier 12 generate a negative gain or provide attenuation, as does the attenuator of the present invention.

With regard to temperature compensation, Berrod et al. describes at column 4, lines 10-12, with reference to FIG. 3 that "[t]he circuit 15 is designed to compensate for the variation in the base-emitter voltage of the transistor 16 as a function of temperature." Applicants submit that Berrod et al. does not describe or suggest that the circuit 15 provides attenuation, as does the attenuator of the present invention.

With regard to Claim 14, Applicants submit that Berrod et al. neither describes nor suggests "... a temperature compensated video amplifier," as recited in Claim 14. As described above in conjunction with Claim 6, the amplifier of Berrod et al. is not a video amplifier.

In view of the above, Applicants submit that the rejection of Claims 6 and 14 under 35 U.S.C. §103(a) should be removed.

The Claim Objections

The Examiner objects to Claims 2-4, 7-13, and 15-20 as being dependent upon rejected base claims, but indicates that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-4 depend from and thus include the limitations of Claim 1. Claims 7-13 depend from and thus include the limitations of Claim 6. Claims 15-20 depend from and thus include the limitations of Claim 14. Thus, Applicants submit that Claims 2-4, 7-13, and 15-20 in their present form are patentably distinct over the cited references for at least the reasons discussed above in conjunction with Claims 1, 6, and 14.

Accordingly, Applicants submit that the objection to Claims 2-4, 7-13, and 15-20 should be removed.

In view of the above remarks, Applicants submit that Claims 1-20 and the entire case are in condition for allowance and should be sent to issue and such action is respectfully requested.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Amendment or this application.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845.

Respectfully submitted,

Dated: May 21, 2004

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